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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Robert C. Frisch

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EXAMINER

NGUYEN, BRIAN D

ART UNIT

PAPER NUMBER

2661

DATE MAILED: 12/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/758,798

Applicant(s)

FRISCH ET AL.

Examiner

Brian D Nguyen

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on the amendment filed on 11/5/04.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 5-6, 12-13, and 17 are objected to because of the following informalities:

Appropriate correction is required.

Claim 5, line 2, “a packet-not-accepted control symbol” seems to refer back to “a packet-not-accepted control symbol” in line 2 of claim 4. If this is true, it is suggested to change “a packet-not-accepted control symbol” to --the packet-not-accepted control symbol--.

Claim 12, line 4, “a receiving node” seems to refer back to “a second node” in claim 7 (line 3: “a first node sending a plurality of message packets to a second node”). It is suggested to change “a receiving node” to --the second node--.

Claim 13, for the same reason as claim 12, it is suggested to change “the receiving node” to --the second node--. In line 2, “a further number of bytes” seems to refer back to “a further number of bytes” in line 3 of claim 12. If this is true, it is suggested to change “a further number of bytes” to --the further number of bytes--.

Claim 17, “control symbol” in line 8 seems to refer back to “a control symbol” in line 6. If this is true, it is suggested to change “control symbol” to --the control symbol--. In line 9, “the link” seems to refer back to “a first link”. If this is true, it is suggested to change “the link” to --the first link--.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 4-8, 10-13, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Garcia et al (6,545,981).

Regarding claim 1, Garcia discloses a digital data system comprising a link that carries message packets, a first node sending a plurality of message packets to a second node on the link as a sequence of message packets, with each message packet being sent from the first node with a sequence identifier (see figure 4; col. 7, lines 30-32), the second node returning a control symbol (ACK, NACK) to the first node for each packet received on the link along with the sequence identifier of the received message packet (see figure 8; col. 2, lines 15-24), and the first node responding to the control symbol to control the further transmission of message packets to the second node over the link (see col. 2, lines 15-24).

Regarding claim 4, Garcia discloses the second node returns a packet not-accepted control symbol to the first node indicating receipt on the link of a message packet that is out of sequence (see col. 7, lines 19-32).

Regarding claim 5, Garcia discloses the first node responds to a packet-not-accepted control symbol by re-sending a portion of the sequence of message packets (see col. 2, lines 15-17).

Regarding claim 6, Garcia discloses the first node queries the second node for an identifier of a message packet in the sequence with which to begin re-sending (see col. 2, lines 15-24).

Regarding claim 7, Garcia discloses a digital data system comprising a link that carries message packets, a first node sending a plurality of message packets to a second node on the link (see figure 4), the second node returning a control symbol to the first node for each packet received on the link (see figure 8), the control symbol indicating a packet error, and the first node responding to the control symbol to control the further transmission of message packets to the second node over the link (see col. 2, lines 15-24; col. 7, lines 19-32; col. 6, lines 11-26).

Regarding claim 8, Garcia discloses the control symbol specifies identity of a received packet having an error condition (see col. 2, lines 15-24; col. 7, lines 19-32; col. 6, lines 11-26; col. 7, lines 19-32).

Regarding claim 10, Garcia discloses the first node transmits a message packet comprising a header portion and a data portion, at least said data portion including an error code (CRC), and wherein the second node applies said error code to detect the packet error (see col. 5, lines 31-40).

Regarding claim 11, Garcia discloses the first node transmits a message packet comprising a header portion followed by a data portion, and the second node inspects at least a portion (sequence number) of the header portion to detect a first error condition, passing a

symbol over the link to the first node to initiate retransmission when it detects the first error condition (see col. 7, lines 19-32).

Regarding claim 12, Garcia discloses the first node is configured to transmit message packets of a first size including an initial number of bytes (the same as the header portion of claim 11), and a second size including a further number of bytes (the same as the data portion of claim 11), and wherein a receiving node applies a first error code to the initial number of bytes whereby corruption of an initial portion of a packet is quickly detected without reference to a subsequence portion of the packet (see col. 7, lines 19-32 where errors detected including an out of order, missing, or repeated packet).

Regarding claim 13, Garcia discloses when a further number of bytes appear in the message packet, the receiving node applies a second error code to the further number of bytes (the second error code id the same error code as claimed in claim 10; see col. 5, lines 31-40 where CRC error code is checked).

Regarding claim 16, Garcia discloses a digital data system comprising first and second nodes connected by a first link, the first node sending a data from a buffer as a transmission sequence of one or more messages to the second node over the first link (see figure 4), each message including a sequence identifier (sequence number) in an initial portion (header) of the message the second node checking the initial portion to identify a faulty message reception and communicating said sequence identifier to the first node with a symbol indicating whether reception was proper such that the first node may respond to the symbol by clearing (implicitly disclosed) the buffer or retransmitting at least a portion of the transmission sequence (see figures 4 & 8; col. 7, lines 19-32).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garcia et al (6,545,981) in view of Passint et al (5,581,705).

Regarding claim 9, Garcia does not specifically disclose the control symbol identifies the type of packet error. However, identifying the type of packet error is well known in the art, Passint discloses identifies the type of packet error (see col. 12, lines 46-53; col. 14, lines 47-57). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to identify the type of packet error as taught by Passint in the system of Garcia in order to correct the error accordingly.

6. Claim 14-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garcia et al (6,545,981) in view of Wiklund (6,452,926).

Regarding claims 14-15, Garcia discloses a digital data system comprising first and second nodes connected by a first link (see figure 4), the first node sending a plurality of message packets to the second node over the first link, each message packet including an error code (CRC), the second node checking the error code, wherein the message packet includes a header portion and further portion (data portion), at least a part (sequence number part) of the header portion being a changeable part that may change as the message packet passes from the

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first link to the further link, and at least a part of the message packet being an invariant part that does not change whereby the error code (CRC) need not be recalculated when the message packet passes to the further link; wherein the changeable part includes a sequence identifier (sequence number), and the second node compares the changeable part of a message packet with an expected sequence identifier to detect an error (see figures 4 & 8; col. 2, lines 15-24; col. 5, lines 32-40; col. 7, lines 19-32). Garcia does not specifically disclose a valid message is sent to a further node over a further link. However, it is well known that an intermediate node will forward a valid message to the message's destination. Wiklund discloses forwarding valid message to the further node (QSE) (see col. 5, lines 22-40). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to forward the valid message to the further node as taught by Wiklund in the system of Garcia in order to for the message to reach its destination.

Regarding claim 17, Garcia discloses a digital data system comprising first and second nodes connected by a first link, the first node sending a plurality of message packets to the second node over the first link with each message packet being sent from the first node with a sequence identifier (see figure 8; col. 2, lines 15-24; col. 7, line 30-32), the second node returning a control symbol to the first node for each packet received therefrom the first link along with the sequence identifier of the received message packet, the first node responding to control symbol to control the further transmission of message packets to the second node over the link, such that transmission of data packets from the first node to the further node proceeds efficiently (see figures 4 & 8; col. 2, lines 15-24; col. 5, lines 32-40; col. 7, lines 19-32). Garcia does not specifically disclose the message is sent to a further node over a further link. However, it is well

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known that an intermediate node will forward the message to the message's destination. Wiklund discloses forwarding a message to the further node (QSE) (see col. 5, lines 22-40). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to forward the message to the further node as taught by Wiklund in the system of Garcia in order to for the message to reach its destination.

Allowable Subject Matter

7. The indicated allowability of claims 12 and 13 is withdrawn.

Response to Arguments

8. Applicant's arguments filed 11/05/04 have been fully considered but they are not persuasive.

The applicant argued that Garcia does not teach or suggested returning a control symbol to the first node that include a sequence identifier of the packet that has been received by the second node and a control symbol that indicates the packet error. The examiner disagrees because Garcia teaches both of these limitations. For example, in col. 2, lines 18-24, Garcia teaches that a sequence identifier (sequence number) is included in each request packet and copied into each response packet. Note that if a response packet is not included with the packet identifier then the sending node after received the response will not know which packet have been received by the receiving node. Garcia also clear teaches of indicating packet error, for example the title describes a method for detecting error and col. 7, lines 30-32 teaches of detecting an out of order or missing.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D Nguyen whose telephone number is (571) 272-3084. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12/09/04



**BRIAN NGUYEN
PRIMARY EXAMINER**